

LUCASFILM LIMITED PRESENTS:

~~REVENGE~~ of the JEDI RETURN



APA-TECH #24

April 1983

The 555 Times #24

The Amateur Press Association for and by
the members of General Technics

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CRUNCHY MEMO FROM THE CHAIR

No, APA-TECH was not delayed this ish. Rather, it has to slowly ease back into its projected mailing time.

COVERS COUNT AS MINAC (How does that grab you?)

I am putting everyone's account onto VISICALC (@#?!). Hopefully, your next (an anniversary) issue of A-T will have a detailed sheet of your financial history.

I sifted through everyone's comments on deadlines and minacs and found most people in agreement. As before, we will aim at getting the mailing out a week after the deadline.

That's it. See you in August.

Rodford E. Smith
922 Belvoir Dr.
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(502) 223-2119

This is being prepared very near the deadline, not because I am late, but because it was planned that way. I just wanted to wait and see if anything came up. Also, I had something else to type just a few days ago and was a little tired of sitting at a keyboard.

My apöögies for all the typos lastish. I was in a bit of a hurry, for some reason that I can not, now remember. I hope to do better this time and in the future.

Question: Can we now, with current technology, build a purely electronic system that will function for a thousand years or more? Assume that it will operate in space, so the only environmental factors you will have to worry about are vacume, radiation and the cold. No rain or organisms. The power source would almost certainly have to be based on a nuclear system of some sort. Solar cells are definitely out as too fragile. Their performance also decays with exposure to radiation. You can use as much shielding as you want, since this is going to be in the asteroid belt. The exact function is unimportant, except to say that it will require external sensors and the ability to respond to a certain condition or conditions. Redundancy is a must. Any thoughts?

@&(\$*_(! I just realised that I left my notes at work. The rest of this will have to be typed tomorrow.

Surprise! I found my notes. This is just five monutes later.

Remember Percheron? The liquid fueled rocket that blew up during testing? The company switched to a solid booster later, but the chief project engineer has now come out with a preliminary proposal for the Percheron II. It is available from him for a small fee. I'll try to have the price and address next time.

GCOMMENTSMAILINGCOMMENTSMAILINGCOMMENTSMAILINGCOMMENTSMAILINGCOMMENTSMAILINGCOMMENTSMAILINGCOMMENTS

Al Deuster: I was wondering whether the Alvin you spoke of was the one I remember from back in the sixties, then I read an article about it in Oceans magazine. It is and it isn't. Every piece, including the sphere and the frame, have been replaced at least once.

Simple, tube-operated radar sets were used in the 'proximity fused' anti-aircraft shells of WWII. They used Christmas tree light bulb manufacturing equipment to make the tubes.

Motown-on-the-ropes: Like it, even though I missed some of the gags. I assume the "Pigs in Space" routine refers to the French towed lower atmospheric probe.

Fermilab in Foment: Congrats on new ~~position~~ position. Your comment about the Afghan restaurant reminds me about what students at UK call the "Iranian Grill" in the UK student center. The problem with NASA is that they always ask for exactly what they want. The politicians aren't used to that. If NASA would ask for a lot more they would still have plenty left after the inevitable cuts, while making the pound-foolish budget cutters happy about getting rid of the "waste." Everybody happy.

False Data Coke Machine: I haven't seen one of these yet. I'm not

sure whether I like the idea or not. I have been having a love/hate relationship with vending machines since childhood. Remind me sometime to tell you the story of the milk machine I drove mad. (By the time I was through with it it would give you the milk, your money back, and your change!) I have no NAR#. I am not a member. Yes on Orreries. We did it.

Rolf Wilson: We used to go to N. Carolina to visit my grandmother and her husband. One of our stopping places while there was an apple orchard which pressed its own cider. You got a discount for bringing empty plastic milk or OJ jugs.

Rabbit Runes: Re photographing leds. At one time I performed some experiments that were variations on a genreal theme. While they are not exactly what you were talking about they are related. In a darkened room i would remove the film pack from an SX-70 typr camera, a Pronto. I would then take an led, connected to an unrectified 5-volt transformer, and wipe it across the face of the film. Since an led is a diode it had a 60-cycle flicker. This meant that the film, placed back in the camera and run through to develop it, cntained a series of dots across the surface.

Note for Al: Let me know the postage on that military manual, please. Unless you're going to be at Marcon. In that case, bring it.

A local SF/Fantasy author, Lawrence Watt-Evans, once remarked at a club meeting that he had sent a manuscript off to Del Rey books with a cover letter that was a transcript of the lyrics to "Paperback Writer", by the Beatles. Fortunately, he had done business with them before, and they already knew that he was crazy.

The rest of this space is reserved for random franking material of Techie interest.

ENGINEERING TIMES

December 1982

To Play Robot, Rub Petroleum Jelly on Your Glasses, Then . . .

Robots have a long way to go before they take over the world. At least that's what Joseph F. Engelberger, president of Unimation, Inc., told engineers assembled for the National Academy of Engineering's recent technical session on U.S. leadership in manufacturing.

To demonstrate what current, state-of-the-art robots can do, Engelberger told the engineers to go home and play "the robot assembly game." His instructions:

1. Rub petroleum jelly on your glasses.
2. Tie one hand behind your back.
3. Put a mitten on your free hand.
4. Pick up a pair of chopsticks.
5. Using the chopsticks, assemble anything at all according to detailed instructions.

*Redford E. Smith, P.E.
(yes, I passed the exam, recently.)*

HIGH TECHNOLOGY/FEB 1983

22



The one true way

In 1891, French physicist Gabriel Lippmann invented the first fine color photographic process. It recorded the entire color spectrum—not just the primary colors—with resolution finer than a wavelength of light. Lippmann coated glass plates with a light-sensitive silver-salt emulsion and floated the plates emulsion-side down in a pool of mercury. The light from the subject passed through both the glass and the emulsion and was reflected by the mercury. At each point on the plate, the incident and reflected light rays set up a standing wave pattern in the emulsion, exposing alternate layers of the silver salts.

Development of the plate converted the exposed salts to metallic silver, forming thin, partially reflective layers within the emulsion. Light shone on the developed plate would bounce between these layers. Some wavelengths of light would constructively interfere, others would destructively interfere to cancel themselves out. The spectrum of the light reflected out of the plate faithfully reproduced the spectrum of the light that had created the silver layers during the exposure.

Lippmann plates were difficult to make and to develop. Any stretching or shrinking of the emulsion during processing would change the spacing between layers, destroying the fidelity. It was also inconvenient to have to float the camera in a pool of mercury (vacuum coating and aluminization hadn't yet been invented). And the finished print had to be viewed from within a fairly small angular range.

These difficulties, along with the problems of making duplicate plates, limited the success of the process. Nonetheless, it was the first and only color process to reproduce true colors.

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FIRST THINGS FIRST: What happened to my contribution for #22? Did I send it to Renée instead of Greg? Did the Postawful gobble it up? If the latter, please tell me and I will send TT#19 out as a postmailing. If the former just include it in fron of this one next time. Thank you.

A Foolish Consistency: As stated in my last issue (which will hopefully appear sometime, somewhere) I just occasionally don't feel like typing, especially if I have been typing a lot for something else. One way I have found to increase output os to keep a notebook at work and write interesting things in it. Some of these eventually get into TT.

A small machine pistol simply isn't practical. Only about one person in ten can use one properly, and then it is only useful in certain situations. One of the greatest criticisms of the M16a1 was the full-automatic feature, which allowed a soldier to empty his magazine in a little over a second. This is why the new M16b has a three-shot burst fire setting to replace the full auto. The M-10 and M-11 are marvelous gadgets, but they just simply are not meant for war! Also, they are just too bulky. Machine pistols have been around since the First World War. All you have to do to make a machine pistol is remove the disconnecter from a standard semi-auto. This give you a nearly uncontrollable device which will empty its magazine before you can release the trigger. Full-auto weapons do have thier place, such as in in fighting in an urban area, but they are impractical as a field combat weapon. (Medium and heavy machine guns are another matter and are not included in the above statement.)

State-of-the-art hi-fi (pronounced "Hiffy"?) reached the limit of human discernment more than a decade ago.

Given another week and a few more sets we would have had the Tinker Toy running Tullio's machine shop.

Quint Sing: why are you so impressed by a 3 Mw radar? Some ham stations put out up to a half Mw for E-M-E (Moonbounce) projects.

Rabbit Runes: Yeah, I sometimes feel dated, too. A lot of this is because most of the people I referee in role-playing games are so much younger. I mention something as background or example, and the just look blank.

How do you get a copy of Better Roads? I'm the Transportation Engineer around here!

1



Bill L. : A good example of poor memory is that I was trying to remember the name of the cartoonist you paraphrased in your title and couldn't. Like you, I also remember certain things very well and others not at all. I can recall watching You Bet Your Life, with Groucho, on TV, even though I could not have been more than five or six. I can forget the author and title of a book and even accidentally buy it again, then recognize the plot years later. Anyone who reads a lot stores an enormous amount of disparate data, some of which stands out for some reason and is remembered.

Quint Sing bis: Like that Jittlov cover.

Third Time Charm: I remember going through the midwest and on out to California with my parents, grandparents and sister about 12 or 13 years ago. I think that Yellowstone and the nearby Glacier were the highlights of the trip. Ah, the snowball fight on the glacier in July, my sister stepping in a puddle of hot spring water, the beautiful scenery, etc. We may be going back this summer.

Rolf: I can't understand how anyone can stand to eat white ("plastic") bread after trying the real stuff. To me, now, white has the taste and consistency of old window putty.

The three examples presented by Gould were used because they had so much evidence to back them up. Even Gould admitted that none of the cases could be proved conclusively, but he said these were the most likely to be true.

Manic Valli: The titles are sometimes interesting, but I only rarely give them any special attention. Unless you just want to continue expending the effort you can standardise.

An SIG in GT? If you mean a group that chats about certain subjects, yes, if you mean one that excludes those with no background in that subject no (I am sure you mean the former). I may have a degree in engineering but I made A's in history and anthropology while getting it. I pride myself on being able to hold an intelligent conversation on any subject from Art to Zoology. So if you want to emphasise talk on non-technical areas, please do so. (I hope I don't sound too braggish. I just want to say that I, too, like to talk about other things.) How about the General Admission Talking Entourage?

Yeah, trains!

This Ozzie is a non-fan who likes to draw and reads some occasional SF.
END MAILING COMMENTS

To those who didn't get mentioned; sorry. I started at the front of the mag and went through, then got burned out near the end. Try getting your zines in earlier next time so they will be closer to the front.

This is being typed Sunday, March 27. I had intended to go shooting this afternoon, but it has been very windy all day; so I guess I'll just sit here and shoot my mouth (fingers?) off, instead.

Shuttle Tile Replacement Evaluated

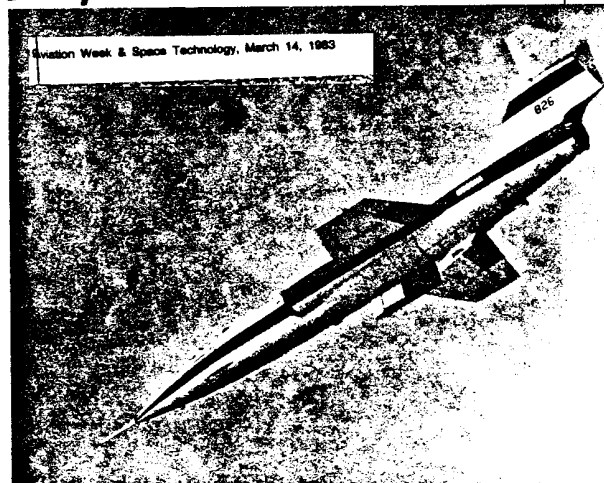
Los Angeles—Initial inflight aerodynamic evaluations of a quilt-like thermal insulation material designed to replace most of the white tiles used as a heat shield on the space shuttle orbiters have been completed at Edwards AFB by the National Aeronautics and Space Administration.

The advanced flexible reusable surface insulation (AFRSI), a silica-based material fabricated in sheets about 3 ft. square, is used primarily on the orbital maneuvering system pod area of the second orbiter, Challenger, but will replace most of the white low-temperature tiles and Nomex felt material on subsequent orbiters (AWAST Jan. 24, p. 57).

NASA's Dryden Flight Research Facility is conducting flight tests to determine the effects of aerodynamic loads on the material, particularly during the shuttle launch phase. Samples of the AFRSI material are mounted on a vertical airfoil or test fixture attached to the fuselage centerline of a NASA/Lockheed F-104G aircraft and flown at various airspeed/altitude combinations, subjecting the material to high dynamic pressures and standing shock waves (AWAST Sept. 6, 1982, p. 273).

As the first phase of an investigation of flexible, lightweight heat shield materials conducted by NASA's Ames Research Center, the F-104G flights included tests of eight separate samples of the quilted AFRSI. Each sample was mounted on the vertical test airfoil, then flown through a climbing profile that started at 0.8 Mach and 3,000 ft. and reached a maximum dynamic pressure of 1,140 lb./sq. ft. at 1.4 Mach and 23,700 ft., encompassing the air loads on the shuttle orbiter during ascent.

Selected samples of the AFRSI material tested were thermally exposed, or heat treated, to simulate material that had been heated to high temperatures during shuttle reentry into the atmosphere.



NASA/Lockheed F-104G fitted with a special test fin on the fuselage centerline is shown during aerodynamic effects tests of a quilted insulation material to be used on space shuttle orbiters. The silica-based material is visible as a square white patch on the forward half of the ventral flight test fin. The F-104 follows a climb profile that simulates a shuttle ascent, achieving maximum dynamic pressure of 1,140 lb./sq. ft. at 1.4 Mach and 23,700 ft.

Preliminary results of the first-phase testing indicate that the quilted material "holds up very well" at high dynamic pressures, even after repeated thermal cycling. Robert R. Meyer, Jr., NASA flight test project engineer, said.

Subsequent tests will investigate other new insulating materials and the drag characteristics of the quilted AFRSI material studied during the recently completed first-phase tests.

It is now Wednesday. (Lets do the Time Warp again!) At the bottom right of this page is a copy of an article from Popular Science about human flight in a vertical wind tunnel. It would be much easier on the moon.

Sympathies for the Michigan members: I just heard on the radio this afternoon that your state will raise its income tax by 38%. Interested in moving to the land of the free.

Sorry about changing the line spacing, there. I didn't realise it had been changed.

If I seem to be rambling, I am. I am sitting here, trying to collect my thoughts and not having much luck. Maybe if I hired a collection agency?

Ah, I have it! Airplanes, I'll talk about airplanes! The only problem with that subject will be stopping.

How many of you know what a B 36 is? Well, I'll tell you. It is the largest operational bomber ever built. It was originally designed with six pusher propellar engines, and later had four jet engines in two under-wing pods added for use on takeoff and dash over target. It had four bomb bays, a crew of 16, and sleeping quarters. That's right, sleeping quarters. Although it had a cruising speed of around nearly 350 knots (top around 450) missions would last nearly a day, most times, and sometimes longer. That's liftoff to landing, people, since this was before the days of routine aerial refueling. The B 36 could take off, fly to Alaska, and return without a pitstop. It was designed to fly to Russia, drop its bombs and return to the states, but never did. It never was used in battle, although it did fly in Korea after hostilities had ceased. (Munch. Slurp. 'Scuse me, I'm eating an apple.)

The recon version, stripped of arms and armor and with its four bomb bays filled with cameras, ECM gear and extra people, flew over Russia with impunity. The huge wing meant it could cruise comfortably at altitudes where the best Soviet interceptors were just about falling out of the skies.

The B 36 went into production with the understanding that it was a stopgap, something to use untill the B 47 was developed. It did its job very well, and was both the last propeller bomber built by US and the only bomber to use both peors and jets at the same time.

Below is something for porpose-molesting Al.

Michigan Diver is a bimonthly covering the interests of sport and commercial divers in Michigan. Editor and publisher Richard Posthuma needs articles on dive travel, shipwrecks, underwater photography, dive safety, diving medicine, commercial diving, and Great Lakes dive sites. "The more related to the interests of Michigan scuba divers, the better." Length: 250-1,500 words. Payment is \$20-\$100 for first rights "including photos, drawings, diagrams, etc. Additional amounts are payable for good quality Great Lakes photos." Query Posthuma at Box 88011, Kentwood, Michigan 49508.

You float on air in this new-sport flight chamber

Engineering picks up
where nature left off:
Now humans can fly

By JAMES A. BAGGETT

Man's oldest dream has come true. With the aid of a DC-4 propeller spinning beneath a screened and padded room, thousands of Nevada thrill-seekers and would-be sky divers have learned what it's like to soar like a bird on a cushion of air. Now, if the first vertical wind tunnel (which opened in Las Vegas in October '81) is joined by franchised Flyaways the world over, then Airflite Associates' dream will have come true, too.

The company expects indoor free-falling to become "a great new thrill sport—no simple sideshow amusement," according to Airflite's marketing manager, Harry Carman.

The idea was originated by a Quebec farmer and flight enthusiast, Jean St. Germain, who built a working prototype in a silo on his farm near Montreal and then sold patent rights to Airflite. But turning the crude original into an aerodynamically efficient and economically feasible structure involved some creative engineering. Architect Alan L. Blum—also a pilot—designed the Flyaway in three concentric octagons, avoiding the need for expensive slip-formed concrete cylinders.

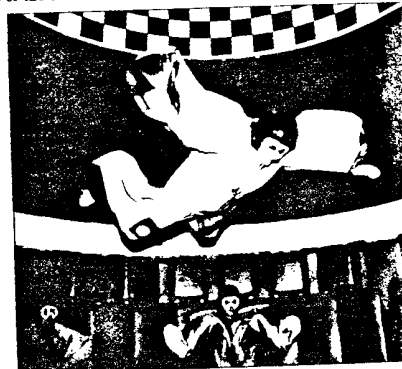
The inner octagon, 20 feet across, forms the flight chamber. A double layer of heavy cable netting protects flyers from the 13-foot-diameter three-blade prop spinning below; a third layer 20 feet above restrains them from sailing out the top. The second octagon encloses an observation area, where a ramp spirals upward to offer views of the action. En-

try and exit tunnels connect the flight chamber and observation area to locker and instruction facilities in an adjacent building.

The outside octagon forms the return-air chamber, necessary to isolate the structure's interior from extreme outside temperatures. Even with recirculation, air conditioning is needed to remove the 1½ million Btu per hour added to the air by friction with the concrete walls.

The need to return the air from top to bottom also raised some aerodynamic complexities, which William Bettes, wind-tunnel director at Caltech, was called in to solve. He carefully determined the ideal curvature of the 52-foot-high return-air chamber to minimize unsteadiness and turbulence caused by suspended bodies in the flight chamber. He also designed aerodynamic leading and trailing edges for the access tunnels, which pass through the return-air chamber. And he added a close-fitting cylindrical shroud around the propeller to increase the lift-to-drag ratio of the blades.

The structure had to be built exceptionally strong to withstand the asymmetrical loading on the walls caused by the reversal of wind direction. The roof is designed to accept a 25,000-pound load. The outside wall panels, poured on the ground and tipped up, are of eight-inch-thick concrete and weigh 52 tons each.



No strings attached: A woman soars in a column of air in the Canadian prototype of the human wind tunnel. Wearing special winged suit designed by a well-known parachutist, she "takes off" by leaning into air stream, maneuvers with arm motions and body tuck. Helmet (with built-in earphones playing music or instructional tips), goggles, and soft-sole shoes complete flight outfit. Prototype got complete redesign (drawing) for efficiency and safety. Las Vegas Flyaway can support up to four adults at once on 80-to-130-mph air cushion generated by three-blade prop spun at 1,200 rpm by 600-hp electric motor.

In just another couple of months I will have held my present job for five years. Which brings to mind the fact that I have lived in Frankfort, with a population of around 25,000, for the past sixteen years. Which is not to say that I don't get around; my family loves to travel and so do I. It is just that sometimes I feel like a stick in the mud for only having changed towns once in my life. On the other hand, Kentucky is probably one of the best places in the world to live. The climate is temperate, a bit cold in the winter and warm in the

summer but striking a good average. The people are polite, there is little violent crime, and the state has several excellent centers of learning. Culture used to be considered a bit short, but nowadays other people are asking us to teach them. The other day I was griping in a good natured way about living in Kentucky, in my Karate class, when one of the students, who is from New York and black, told me that I didn't know when I had it good.

Well, that about does it. Much of my zine this time was franked, but I hope you enjoyed it anyway. Looking back over this it seems stranger than usual in spots, but I'm going to let it stand. There is still some white space left, so I am going to fill it in a miscellaneous way until it vanishes. See you.

I just got a video tape of Forbidden Planet and have been ODing on Krell technology. It is still a great film, and the only dated part is the romance scenes.

I am now in the process of studying for my General class ham license. I had decided to wait and upgrade from Novice after passing the Professional

Engineers exam. I learned that I passed a couple of months ago, and have just started getting back into amateur radio. I have had my ticket for two years, but but have never been on the air. I would rather listen than talk.

Rod

Faster than a speeding bullet:

$$\frac{ds}{dt} \rightarrow +$$

More powerful than a locomotive:

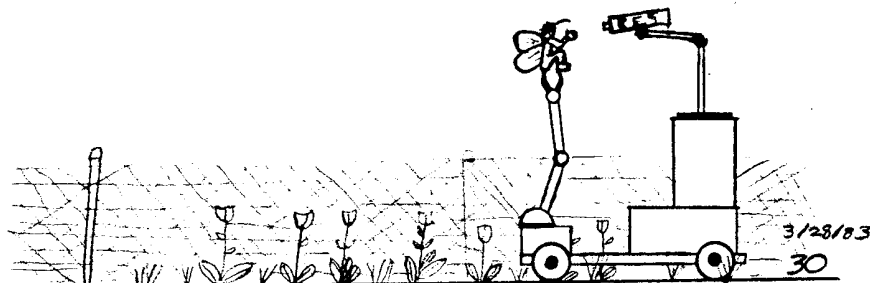
$$HP = 33,000 \text{ ft lb}$$

Able to leap tall ^{min} buildings in a single bound:

$$KE = \frac{1}{2} mv^2$$

3

3



"That's all right. I don't believe in you, either."

4

A FOOLISH CONSISTENCY by Jamie Hanrahan

being yet another bland assortment of mailing comments, diatribes, mailing comments, self-aggrandizements, and mailing comments for the 24th issue of APA-TECH

Address and phone no. and etc. are in the TOC. I hope.

The last disty looked pretty promising. Of course, I did get it a tad late, but I understand this was an exception. I hope this trend toward larger pagecounts continues, I thought to myself... So, start writing, said my conscience.

Damned conscience anyway. I suppose I ought to have it removed.

But it occurs to me that we are nearing the fourth annish, and look, people, we do not have all that much to complain about. Lots of apas never make it to the first annish. So some of the original burst of enthusiasm that fired A-T's rapid early growth has faded; so what? We're still here; some of the original members are still writing at the same pace; some of us latecomers have markedly improved; and Greg reports that there'll be two new names nextish. I doubt that very many four-year-old apas would find an excuse to complain of such trends.

Not, of course, that we can afford to rest on our laurels... I'm trying to recruit a few new people myself. But I don't think the doomsayers of Apa-Tech have a leg to stand on.

When Greg Ruffa drops to a page an issue, and Higgins drops to a page every other issue, then we'll be in trouble.

MAILING COMMENTS ON A-T 23

Cover: Listen, I hope you people don't mind my posting some of this stuff on my cubicle partition at work! It's quickly enhancing my reputation as an oddball, of course, but it does get laughs...

Donna: Ishercon sounds like fun, as usual. Your comments on marriage and its costs hit home -- we had similar qualms. We were both just starting new jobs, and setting up housekeeping in Los Angeles, and the great increase in our outward cash flow made us wonder quite seriously about whether we could even afford to elope, let alone have a wedding. Fortunately, tradition and sentimentality -- and love -- prevailed. Our wedding was by no means large nor fancy, but it was truly a joyous occasion, and it got our new life off to exactly the right start. We had to scrape and scrounge (and use a bit of plastic money) to afford it, but we managed, and I'll never regret it. Driving off to Las Vegas and getting married amongst a roomful of like-intentioned strangers just wouldn't have been the same. Tell Tullio that he'll miss out on one of life's greatest experiences if the two of you decide to just get married. Tell yourself that you can't afford not to have a wedding. Ok?

ct Donna Struwe, contd. -- Now, there will be a brief pause, while those of you who are diabetics quickly check for dangerous blood-sugar levels which may have been induced by skin contact with the preceding page. But I meant it, every word of it.

And I wanted to get that in first, because what I have to say to you next, Donna, you might not like so much...

This quarrel between you and Renee in Apa-Tech's pages is beginning to look a bit ugly -- from, I most regretfully point out, Donna, your side only. Renee's replies have been polite and to the point, and generally with a "if you think I'm wrong, let's talk" tag-line. You, on the other hand, seem to me (greatest possible emphasis on "seem to me"; if I'm wrong, let's talk! Call, if you want; I'll call you back next day, on DEC's tab) to be trying to pick a fight. At the very least, you are not phrasing your remarks to Renee in such a way as might encourage her to listen.

Which is especially ludicrous in light of the fact that you came out and agreed with Renee that the minac rule should be overlooked! You seem to be carping at Renee for doing nothing more than stating in print what everybody knows -- that in an apa without a waitlist, there is no effective way of enforcing minac, since anybody who's thrown out can join again, immediately.

And, you're absolutely right: We can't afford to lose any members at this time. So why do we need to make everyone feel that if they miss two consecutive issues they not only will be thrown out, but won't be welcomed back? Hah?

Greg Ruffa: Odd, that bit about Murphy. I had read that:

"Murphy was a fictitious character who appeared in a series of educational cartoons put out by the U.S. Navy to stress aviation safety among its maintenance crews. In the cartoons, Murphy was a careless, all-thumbs mechanic who was prone to make such mistakes as putting a propeller on backwards or forgetting to tighten a bolt. He finally became such an institution that someone thought up a principle of human error called Murphy's Law...: "Any part that can be installed wrong will be installed wrong at some point by someone."

---from We Seven (chapter "Glitches In Time Save Trouble", by John Glenn)

Thanks for printing the Space Shuttle ... oops, "STS" flight plans. Looks like it'll be a long time before they launch from Vandenberg... Re yr California plans, I'll be sending Westercon info at the same time that I mail this to Renee.

John Frambach: RAEBNC.

Bill Leininger: Re Mystery Ad -- Awhile ago someone ran an ad for Programmers in the LA Times with a Star Trek motif. ("Beam up to a challenging working environment and move past your contemporaries at warp speed...") I was going to run it in A-T, but I forgot about it. Just as well, I suppose.

QS22: Good news about Mike Jittlov; thanks for relaying, though we'll have to wait to see it on free tv, I expect. (This household is distinctly non-TV oriented. Our set is a 12-year-old Heathkit that has seen better days, and we have not sprung for cable, nor subscription TV, nor VCR, nor videodisk.)

ct Greg Ruffa, contd. -- I don't know of anyone who's been too impressed with Niven's recent work. I like a sprinkling of rivets in my science fiction; do you know of anyone who's writing the sort of stuff that Niven used to write?

David Brin seems to be promising; he's got the required hard-science background, and he's a helluva writer (see "The Postman" in the Nov 82 Asimov's). The "McAndrew balanced drive" stories that Charles Sheffield has been writing, first in Analog and most recently in F&SF, are good... anyone else?

Keith Thorne: Hello, fellow lactivist! Hope you got the tax forms we sent you (aside to everyone else: We sent them at Keith's request; no, we're not undercover agents for the California Franchise Tax Board...).
RAEBNotherC.

Rolf Wilson: Tax refund? You're getting a tax REFUND?????

I don't think I'll speak to you for at least a week.

Valli Hoski: Ah, you have touched a spot deep within my soul. I, you see, came within about one-tenth of a percentage point of being a hard-core train buff. If it's ever convenient, you must visit the railroad museum in Sacramento. Oh, I'm sure the museums back east with their dozens of locomotives are bigger. But this one does a good job of showing not just the hardware, but how that hardware influenced -- indeed, was one of the mainstays of -- the way of life in early American California, and of giving you a feeling for what cross-country train travel might have been like in the days when the only other option was the stagecoach. "Trains are a process of journey in themselves" -- I like that.

DEC has some new stuff out that you might be interested in; see my remarks later on.

oh, now I get it -- sysTEAM!

Misha: Solar SysTEAM???^ I agree that radio has great potential for a comeback, but not with the programming that our NPR affiliates are offering. (I take that back; one station, KCRW, has some fairly interesting stuff -- but always when I'm at work. Perhaps I should invest in a cheap appliance timer and a used reel-to-reel recorder...)

David Levine: Even having "contacts" these days isn't a guarantee... RAEBNC.

Meramorphic Melange: What con is that in San Diego? // I characterized Descent of Anansi as a "space procedural", by parallel with the "police procedural" sub-genre of detective fiction. But competent police procedurals depend on giving you a look at policemen and victims you care about. As you said, Anansi failed bitterly on this point. (I remember thinking: "Oh, no, not tides again!!?!")

On the "three questions" (yes, again!), I attended a fascinating discussion group at Aquacon, hosted by David Brin. He pointed out that science fiction was the "mainstream" fiction of today, as any fiction that ignored science's effect on society was obviously completely irrelevant to the times. It sounded good, but of course the New York critics wouldn't agree.

1000 KW-hours in one month? A \$100 electric bill? Oh well, your rent is undoubtedly much cheaper than ours.

Andy Anda: Congratulations on your new job. If you're at Los Alamos and working on VAXes, you may well run into my old mentor, Lee Smith... if you get a chance to take a course from him (Los Alamos has paid DEC enough money to keep him there as a semi-resident VMS instructor), jump at it! He's good. How long will you be there?

* * *

I don't have a lot of time left; in fact, I don't have any (I started on my mc's soon after AT-23 arrived, but due to one thing and another, it's now the Saturday before the deadline, so I hope the collation is just a wee tad late (see what I mean, Donna? If deadlines were enforced rigorously, I wouldn't bother finishing this and mailing it in at all; as it is, I'm pretty sure I'll make it into the collation, even if not into the TOC. Rigid deadlines tend to reduce the number of contributions. In my humble opinion.)). But I do want to pass along some interesting news from work.

Firstly, DEC has some new computer-assisted instruction (CAI) products on the market and just about ready to market. In the first category is something called the Courseware Authoring System (CAS). This is a software package that runs under VAX/VMS and allows people to develop CAI courses, which presently utilize the GIGI (240x768 pixels, 6 colors plus b&w) terminal. The authoring language is, I'm told, somewhat like that used on Plato.

In the second category is something that's very exciting. Apparently, someone at MIT came up with a new way of looking at the NTSC video signal, which led to easy ways to combine various non-synched video sources into a rock-stable, broadcast-compatible picture without using the expensive time-base corrector that used to be required. DEC has bought the patent rights to this development. The first product to use it will be something called IVIS (Interactive Video Instruction System), which consists of a GIGI terminal, a monitor, and a computer-controllable laserdisc player, plus the required combining circuitry. The result is a system that can do what Plato does, but do it better -- since computer-generated images can be combined with still and moving images from the laserdisc.

We already have two IVIS systems in-house; DEC is using them to train field ~~circus~~ service personnel. I don't know when this product will be sold outside DEC, but when it is, some interesting things will happen. Naturally, CAS will be expanded to support IVIS as well.

You didn't hear about any of this from me, of course...

We have one of the three DEC Personal Computers (the Professional 350, which is the one based on the 11/23-on-a-chip) on the floor for demonstration purposes. It's a nice looking machine, but it confirms my impression that it's not a programmer's computer; the operating system is strictly end-user-application oriented. The PC-100 ("Rainbow") should be a lot nicer. I also understand that it's faster.

Data General's new MV/10000 is indeed faster than the VAX 780. They also have a slight price/performance edge, assuming you only want to run one program at a time (I've never seen a system that did context switching better than VMS). But just wait 'till September.

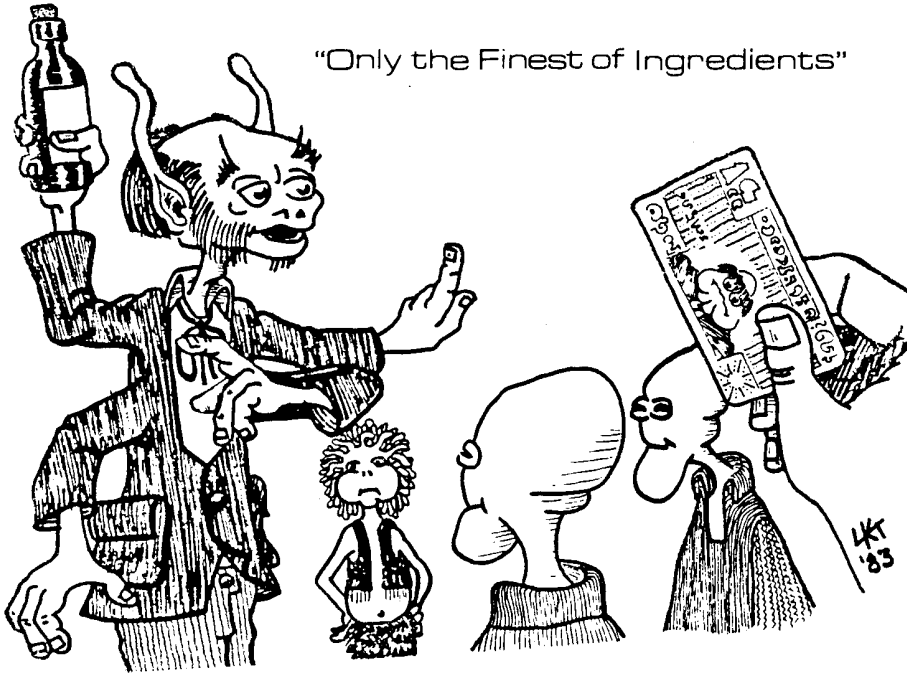
Have to run. Congratulations to Mike and Alice; couldn't happen to a nicer pair of people! BCNU, all...

P.S.-- Challenger just landed! Hurrah!!! and with fewer after-launch problems than anyone had a right to expect! Now if they can just find out what went wrong with the IUS... By the way, NOone at TRW calls that satellite "tidriss".

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ALL THIS SCIENCE I DON'T UNDERSTAND

from Dick Smith * 710 S. Scoville * Oak Park, IL 60304 * 312-DUF-FUND

I'm allowed to reuse this title because I'm on vacation this ish. Not that I want to be on vacation, but things have just gotten too busy around here. I'll offer the traditional promise to do more next ish.

The material on the other side of this zine is one of the reasons that I've been too busy. There's a fight going on in Ann Arbor for control of the Confusion convention, and I was asked to be Toaster by the apparent winners. I'm not going to use space here to try to explain what is going on there... you can read about it in UDLT instead.

I've also been quite busy helping out the Austin in '85 NASFIC bid give parties. It's certain that Australia will get the worldcon now (as no other bid has appeared before the deadline), and the fight for the NASFIC is starting to get pretty hot. Three cities are bidding: Austin, Detroit, and Columbus. I've thrown myself in with the Austin people for the moment... they're nice rather than evil SMOFs, and promise to run a friendly con. They have a decent city with decent facilities, too. You can see them (or at least some of them) at MarCon and MidWestCon. Look for the bid parties with the Texas Chili.

There will be an issue of UDLT any day now. Members of this apa DO NOT get a copy automatically, so unless you've contributed news or art or something, you should send some (or filthy cash... 25¢ per ish is the current rate) if you think you want to see the zine. I'd rather have gossip or art relating to the current fannish news than your cash, but I know how lazy you are...!

That's all the news for the moment, except to mention to anyone who hasn't heard already that Valli & I are definately headed in separate directions. No one is going to move out of this house in a great hurry, tho. We've both had enough moving for the moment, and we plan to at least last out the lease. But we're getting more and more separate otherwise. Oh well. I'm keeping busy enough.

Upcoming cons: MarCon, MidWestCon, Xcon probably (they've asked me to be on a panel, and to run their mimeo room again). Possibly Archon & RiverCon. I've been wondering about ConQuest... there will be some Austin people there. I've asked for a room at the HILTON for Constellation, but haven't heard anything yet... don't know that anyone has tho, so I'm not worrying.

My best to all... more next time....



HOGU and BLACKHOLE

// 1983 HOGU &BLACKHOLE NOMINATION BALLOT OOKFISHAL HOGU & BLACKHOLE 1983 //

This is the OOKfishal ballot for nominations for the HOGU & Blackhole awards, fandoms' prestigious recognition to the dottering wimps and fuggheads that ruin your life. This is your chance to get back at them all.

The HOGU is named for Hogu Chabsnerg, founder of modern Sinus Friction [Never called "Si Fri"], publisher of ANALFOG, Amuzing, Thrilling Chunder Stories and other famous hoaxzines. The awards are sponsored by APA-H, the APA for Hoaxes and Humor and are awarded at the Yearly Hogu Ranquet.

VOTING: Send this ballot, or a copy thereof to: HOGU &BLACKHOLE COMMISSION
c/o Elst Weinstein 1190 S.Winery#112 Fresno CA 93727

Deadline for nominations: May 15,1982 (Categories explained on other side)

- 1.The DeRoach Award for Putridity in Every Day Life
- 2.The Aristotle Award for Grand-Master Lifetime Achievement in Putridity:
- 3.Best New Feud(Starting 1982 or later)
- 4.Best Traumatic Presentation
- 5.Fandoms' BIGGEST TURKEY: Divided to allow fans outside you-know-where a chance.
CLASS ONE: Professionals(from you-know-where)
- CLASS TWO: Amateur(from anywhere else)
- 6.Best Hoax Awards(Other than the Hogus)
- 7.Best Typeface
- 8.Best Religious Hoax(The Flavor-Aid Award)
- 9.Best Professional Hoax(Hoaxing as a Profession)
- 10.Best Fan Hoax
- 11.Worst Fanzine Title(The AARD DAZE Award)
- 12.Best Dead Writer(Must be living to qualify)
- 13.Best Hoax Convention
- 14.Best Pseudonym
- 15.Special Bagelbash Award
- 16.DEVO Award
- 17.Best Has Been(Deposed Dictator's Award)
- 18.Free For All
- 19.Most Desired Gafiation:Winner to get Mid-Atlantic Fan Fund!(MAFF)
- 20.Best Recipe Using SMURFS(eg: Spaghetti and Smurfballs, Strawberry Smurfcake,etc.)
- 21.Most Putrid Scene from STAR WARS III

1983 HOGU & BLACKHOLE NOMINATION BALLOT OOKFISHAL HOGU & BLACKHOLE 1983

22. Most Disgustingly Comercial ET Ripoff (Eg; ET Underoos, ET Kitty Litter)

23. Most Bizare New Video Game (real or imagined)

24. MIXED MEDIA

25. Closest Encounter of the Fourth Kind

BLACKHOLE AWARDS: Special Recognition of extraordinary putridity.

1. Standard Blackhole (4 given, nominate more than one)

2. Invisibility Award (Conspicuous Absence)

3. Incompetence Award (Political Refuse Award)

4. Publisher's Award

5. Greed Award

6. Half-assed Con Officiousness

7. Brown Hole Award for Outstanding Professionalism (Past winners: Spinrad, Elwood, Alexander Haig, James Watt)

Explanation: Best Traumatic: some major national or world event. Bagelbash: Nominate a putrid idea or item. Free For All: nominate a putrid bumper sticker slogan. DEVO Award: To who has done the most Harm to Science Fiction. Mixed Media: Amuzing tid-bits of film, TV, radio, etc. Closest Encounter: Sexual assault and battery by two or more, consenting or otherwise. Incompetence: your favorite politition. Most of the rest are sorta self-explanatory. If not, just nominate as you like.

These awards are peer group awards: if you don't feel qualified to nominate then peer over another's shoulder and copy. Ballot stuffing is encouraged, so stuff it! The vote is tallied by the Austrian Ballot: vote as often as you like, but we decide the vote in secret so as not to be unduly influenced by the actual count.

If you or your group would like to either place a new category or have a special award given at the Ranquet, please use the space below:

(Please give a brief description of the award or category)

A special fanzine containing most past Hogu Ballots, historical flyers, articles on heaxes, plus numerous Clyer/Weinstein colaborative efforts will be available for \$3, pub-date Worldcon 1983. You may reserve copies now at the above address (see front side.)

NOTE TO FANZINE EDITORS: Please copy this ballot and distribute it with your fanzine. The Hogus/Blackholes are fandoms' last chance to laugh at itself, yet it needs your help!

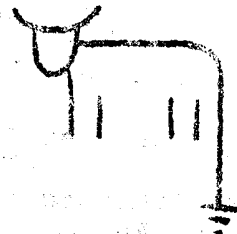
NOTE TO CONVENTION FANS: Please copy this ballot and distribute it at your convention. See above note for explanation.

1983 HOGU & BLACKHOLE Nominations Ballot 1983 OOKFishal That's All Folx!

This ballot reproed by Uncle Dick.

SAW A HIGHWAY OF DIAMONDS
WITH NOBODY ON IT

Another chronicle of Life In
The Slow Lane from W.
Skeffington Higgins. This is
Spinhairiscope Media
publication number Twenty, for
Apa-Tech 24. at 853 Lorlyn
Drive, Apartment 1A, West
Chicago, Illinois 60685.
Phone: (312) 293-1050. Office
address is MS 220, Fermilab,
Box 500, Batavia, Illinois
60510.



Ground
Beef

(#100475)

West Chicago Becomes Boom Town As Population Swells

I've got neighbors! Todd Johnson, who shared my apartment for a couple of summers while he was a student, landed a job in Fermilab's Main Control Room ("This isn't just any control room, it's the Main Control Room!") as an operator. He started early in March and is now deep in the Booster Rookie Book and a pile of other documents. With him came Mary Lynn Skirvin, flower of Indianapolis. They've inhabited my place for a month or so, but soon they'll move across the parking lot to another building. A proper studio for Mary Lynn's painting (you should see her watercolors) and a proper electronics bench for Todd will doubtless be forthcoming. I am gleeful; I haven't had friends I could walk to visit since 1978.

No, I Don't Get To Spend Any Of It

I've been at least busy enough to skip the February mailing. At work I transferred back to the Experimental Areas Department (which swallowed the former Neutrino, Proton, and Meson departments) in December. Since then I've been working nearly full-time on shoving cost estimates for our new projects into a computer. Along with the new accelerator will come more energetic particle beams, which require more shielding, more bending magnets, new buildings, fancier experiments, and so forth. The Department of Energy is giving us fifty megabucks for this work. Every six months they want to drop by and see what we're doing with the money, keeping track of any changes in price or design that might affect our costs. Preparing for this review has been known to keep everyone tied up with paperwork for weeks beforehand; hence the desire to stick it all on the Cyber. It's a new world of budgets, schedules, and inflation that seems remote from the hardware I'm used to. But the database is taking shape nicely, and I may be free to do more operational work in a month or two.

When the Tevatron beam is finally extracted, I'll go on shift again to tune beam lines. This time we'll have all three areas, not just Neutrino, to worry about. Furthermore, most of the beamlines will be new. We'll be one-armed paperhangers for a few months. Startup is now scheduled for October, but of course that could slip if the Tevatron has teething troubles.

He Shoulda Been In Show Biz...

I just finished reading Charles Babbage: Pioneer of the Computer by Anthony Hyman (Princeton University Press, 1982). It's rather dry-- I wouldn't recommend it to anybody but a scholar-- but it covers the full scope of Babbage's polymath accomplishments. He was a minor mathematician, a minor economist, and a very minor philosopher. But he was a century ahead of his time with his work on computing and on operations research. The Difference Engine project also had a direct effect on the techniques of precision manufacturing in Britain, because it pioneered new levels of mechanical tolerance.

The most surprising item in the book was an account of Babbage's experiments in theatrical lighting. Stages were at that time (around 1840) lit with gaslights; he suggested using a very bright light source, such as the newly invented limelight, and jars of colored liquid to produce colored light. Babbage even persuaded impresario Bernard Lumley to try this system in his Italian Opera House. "Michael Faraday offered his counsel and assistance," writes Hyman. "It must have been quite the most scientifically high-powered stage lighting team in the history of the theatre." Babbage's scheme worked once, but its fire hazard was too great. It certainly inspired, however, more successful later approaches. So, Dave, techies in the theater have illustrious antecedents...

Blossoms From The Fourth Estate

Magazines flowing across my desk have brought me several tidbits of news concerning things that have popped up before.

Last mailing Mr. Leininger discussed the Johnston Island antisatellite tests of the 1960's. In the March Physics Today Herbert F. York, a distinguished veteran of the arms-control business, writes of "Arms-Limitation Strategies:"

"From Eisenhower onward, our Presidents have concluded that we would derive a net benefit from a situation in which no state had any anti-satellite capability. The US, therefore, was willing to forego a program to develop such weapons, in the hope that the

TODD JOHNSON
MARY LYNN SKIRVIN
GUEST ARTISTS THIS ISSUE

Soviets would follow. As a result, proposals arising in the US Air Force and aerospace industry to develop a general-purpose, anti-satellite weapon were continually rejected.

Either York (who should be in a position to get it right) is wrong, or we don't correctly understand the purpose of the Johnston Island work. One of us should write a letter, Bill.

In the March issue of *Aviation Week & Space News*, who's been making studies of advanced automation in space systems, has a piece that may interest John. He proposes schemes for terraforming Mars and Venus using the immense potential of self-replicating "Von Neumann" machines. Using assumptions for his machines which I regard to be too small by a couple of powers of ten, he finds that both planets could be made more or less habitable in a few hundred years.

Happens that I've looked at this problem myself. I don't believe that one automaton could build a copy of itself in one year, and I don't believe that it could weigh only a hundred tons. Freitas plans to extract oxygen from Martian rocks, and doesn't seem to think that excavating the entire planet to an average depth of four meters is a problem. He doesn't mention the bottlenecks that might form for rare but vital minerals the robots need. And he seems to think that 6×10^{24} joules of energy can be had for the asking. This is the amount of solar energy falling on Mars in 6.4 Martian years (12.1 Earth years). If your factories are powered by sunlight, their overall conversion efficiency must be higher than a few percent to finish the job in centuries-- even if your collectors cover the whole planet. If they are powered by other methods, they won't find enough uranium or thorium or deuterium on Mars for the job, and fuel will have to be imported from off-planet.

In the same issue of *JRS* there is a paper by E. Sheldon and R.H. Giles on the view from an interstellar rocket. It looks (to my inexperienced eye) as though they've considered all the stuff left out of previous studies on the subject. They may have everything that Ruffa and Wilson have, with the exception of color. Oh, well, maybe our boys can come up with a movie version before the competition does.

Sky & Telescope, in its February issue, managed to scoop Aviation Week on this one: The Galileo Jupiter orbiter and atmosphere probe will cost about 600 megabucks. There now exist spare parts for nearly every part of the spacecraft. For another \$100 million, JPL could assemble these into a second Galileo which could be sent to Saturn. Added costs for a Shuttle launch and Centaur stage aren't mentioned, but my guess would be between 50 and 100 million dollars more.

This prospect is very exciting, because the Galileo is a fancy state-of-the-art probe, much more capable than anything else we can afford to build in the next decade. We'd be getting twice the data for a third again the price.

There's a catch. This proposal has surfaced just at the time that the Solar System Exploration Committee, the scientific advisers to NASA, has worked out a detailed plan for low-key, low-budget planetary exploration in the near future. They are resigned to the lowered budgets of the Shuttle era, and are determined to get the most science for the money by assigning priorities to their work and by using economical spacecraft designs. The days of half-billion-dollar planetary probes are over. Unfortunately, the Galileo Saturn scheme would eat up money that could be used to support new starts on several more modest spacecraft with high-priority missions. The carefully constructed plan would have to go out the window. I guess we'll hear more as time goes on.

Visit The Fabulous Hot Springs Of Fort Wayne

Mary Lynn was doing her Indiana state income taxes the other night. She pointed out that, in these energy-conscious times, Indiana is enlightened enough to give a tax break to homeowners who install energy-conserving devices using--let's see here-- solar power, wind power, water power, or geothermal power.

Geothermal power?

In Indiana?

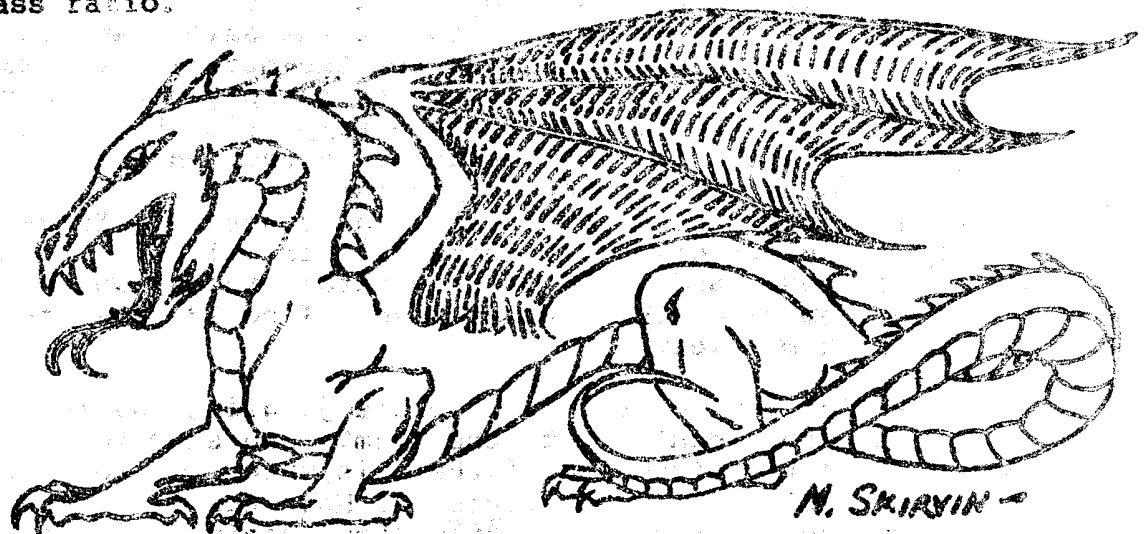
Mailing Comments on Apa-Tech 22

GTB-- I agree with you that changing the minac requirements won't accomplish anything. Heaven knows we don't need smaller mailings. Fortunately (if my intelligence is correct) new blood should be injected into the apa shortly. And, by the way, I want to compliment you on the improvement in getting mailings out speedily.

Rod-- I was talking about an onboard power source for starships. My numbers didn't even include inefficiencies for dragging rocket fuel along and so forth, just total change in kinetic energy for a hypothetical mass.

For interstellar ramjets there are two problems: they'd be quite difficult to build, and they have to be boosted to relativistic speeds anyway before they can gulp enough hydrogen to begin working. Thus, while they are an attractive solution to some problems of interstellar flight, they don't address the question of how to get to high speeds in the first place.

Your suggestion that a ramship carry its energy source along, using the interstellar medium only as a working fluid, is known as the Ram-Assisted Interstellar Rocket. (By contrast, the ramjets we usually consider must obtain their energy by fusion of the interstellar hydrogen, heating the gas in the process and expelling it for thrust.) The RAIR simplifies some engineering problems, like how to obtain enough deuterium for easy fusion, or to sustain the p-p reaction in a reactor, and can be built with a relatively low mass ratio.



Cap'n Al-- Deke Slayton was the seventh, not the eighth, Mercury astronaut.// The lost notepad may well be Barry's. Let's ask him.// Your database questions are fuzzy, as I don't know quite what you're talking about. What, exactly, would be in your techie database? My first feeling is that GTERS would rather send messages to each other than look up anything in a database. Think about implementing a national bulletin board.// The only way to make an SR-71 go Mach 8 is to forget about crossing time zones on a east-to-west flight. I stand by my remarks of last mailing.

Cartoon Jam-- Let's keep this up, especially if it gives us more of Greg's cartoons, and Barry's, and Marty's...

Bill L.-- The OMS and attitude control engines in the Shuttle have cross-connected propellant supplies.// Those plastic tags contain, I think, a resonant circuit which goes "boing!" when it is moved into the tank circuit formed by those gateways in the store. Ron Haynes has a good Sams book on security systems which explains a lot of that stuff, but I've forgotten the title.// Re Rolf and Mary's wedding present: aren't there circumstances in which a dozen woks might be useful? We had only one at Ishercon, and could certainly have used two or three. (Bring your woks next year, folks!) // I once spent 20 minutes rolled up to a curb with semis roaring past a foot and a half (or less) away

trying to open my hood (which has the kind of catch you have to get out and stand in traffic to open)...". Were you alone, or with your car? // Please explain why surprise parties require a "cast iron digestive tract."

"All the ordinary, everyday uses of a kitchen appliance I should be able to figure out how to do just by looking at the controls." Have you ever been in a hospital laboratory? The design goal there is to bring a complicated process to a point where it can be done simply and routinely. Thus the ideal machine has a place to put the sample and one "ON" button. The fewer possibilities for the med-tech to make a mistake, the better. This contrasts sharply with the design philosophy of the engineer/tinkerer/physicist developing something, which is "Give me knobs to vary anything I can!" I was very disappointed on my first visit to a nuclear medicine department's scintillation counter. There were buttons to select gamma ray energies for all the commonly used isotopes, and the discriminator knobs which could override them were almost never used. I could have run the apparatus in my sleep.

Rolf-- Can you control "phi" while juggling and eating the apple, so you don't get the stem? You seem to have some control over the direction of the axis when you're juggling clubs...// Clarke's The Sands of Mars was for a couple of years my favorite novel. As 2010 shows again, he's not very good with plots, but he writes a great travelogue. // Also note that Gene Wolfe has two novels up for the Hugo this year. Fat chance. (Sorry, Gene... maybe the Nebula?) // I agree with your admonition to yourself: your readers would enjoy it if you contributed every issue.

Donna-- Re Jerry's ct on dreams: what about people who don't die?// The attic was a vast improvement, an impressive piece of work. Next year it'll be finished, right?

John-- Wet trenchcoat???// NASA has had at least one recent workshop on advanced automation in space. Boy, is there ever a lot of work to be done. Smart space probes, telefactoring, self-repairing machinery, even the distant dream of the self-reproducing lunar factory (or "Von Neumann machine"). // I understand that Chicago artist and GTer Doug Rice just got a job inking for First Comics.

Mailing Comments on Apa-Tech 23

Jamie-- re hobbyists and personal fanzines: How many SF fans really publish their own personal zines? A lot, I know, but a dwindling fraction compared to days of yore. Your point is well taken-- that fans do proportionally more personal publishing than other hobbyists. But (as we've discussed before) the importance of fanzines has been

dwindling for years, if not decades.// UUCP: I recently got a look at a network map of Usenet. The names of the machines were bewildering, and most of them gave no clue to the identities of their institutions. To locate a person on the net (it seems) one would have to know his exact routing in advance. This suggests an analogy with other communication systems: The Post Office's routing is isomorphic to a map of the landscape, but the phone service assigns only a string of arbitrary numbers to each user-- hence the need for a telephone directory. Is there a directory for Usenet or UUCP?

Lots of people seem to call me by my last name. It probably has something to do with the ~~over~~abundance of Bills in Chicago fandom: not just Messrs. Roper and Leininger, but Surrect, Colsher, and sometimes Hanes.// Greg and I have indeed considered publishing the starship stuff. I will say no more until we really have something on paper. Regarding Analog, I've long had a suspicion-- without any real evidence-- that selling a Science Fact piece there would be difficult. Considering their techie audience, they probably have at least as many readers capable of writing a competent article as they have those who can pen good science fiction. But they only publish one article per issue. I'd guess they have a long input queue, and/or strict editorial standards, for such material. Do you (or any writer buddies you can ask) know more about this?

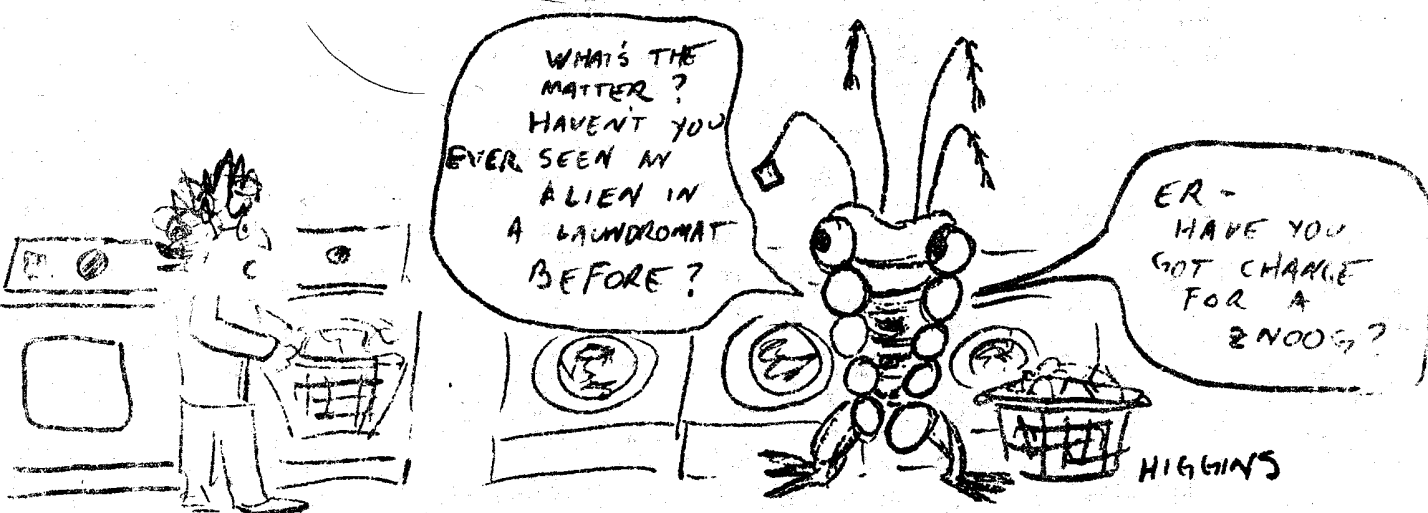
I disliked the unspoken messages in E.T. --the impression that Government Scientists will abandon all ethical considerations for a chance to examine a really valuable specimen. See Donna's zine in A-T 23 for supporting evidence.// Those folks at the dead-dog were French. Cap'n Al and my cousin Gene Olmstead were also present, I recall. // "Seven days is a long time to live out of a suitcase." You sound like you don't enjoy traveling much. As long as I can do laundry on the road, I don't reach the state you describe for three weeks or so. Ever since I left Florida for Notre Dame in 1972, my friends and relatives have been so scattered that I must take to the highways often in order to maintain even minimal touch. (Even before I got involved with SF fandom!) I hope to attend weddings in Atlanta and Columbus this year, and my vacation is shaping up as a week in Baltimore, a week in Washington, and maybe a week somewhere else.

How long do those courses you teach last?// Fermilab has forty or fifty PDP-11s, and I believe not a one runs Unix. Of course, almost all are used for real-time measurement and control, something Unix can't really do.// Barry Gehr works at a place with a VAX and some GIGIs. He'd probably love it if you could send him some interesting software. Why don't you correspond with him? He's a chemist, but (like Roper and

Flynt before him) he's trying to turn himself into a computer wizard. 129 Burcham, Apt. 10, East Lansing, Michigan 48823.

Donna-- Sorry I disappointed you by failing to contribute last issue. I really enjoyed your account of vacation and Ishercon. I'll try to be more voluminous this time, okay?// The point about throwing people out of the apa when they don't make minac is, of course, moot if our waitlist is zero-length. And I don't think it will get very long very soon.

Your zine was great for egoscanning, as I found myself mentioned several times on nearly every page. I guess we saw a lot of each other that month.// We did pretty well, no disasters this Ishercon-- but (as every year) I still wonder if there are ways to make things go more smoothly. How can we get better planning, less work in the kitchen, lower budgets, more fun per capita? Let's discuss it during the next year... // Even a Kalamazoo wedding won't keep many fans away (if we're invited). Can we ease the burden somehow? // For reasons which may become apparent before this is published, yes, I will buy all your Diablo ribbons. I know a ready market for them...



John-- I was always bored by pinball machines, but became more and more fascinated by video games as they grew fancier. A catalyst to my interest was "Frantic Life and Symbolic Death among the Computer Bums," an essay on MIT Spacewar by Stewart Brand (Mr. Whole Earth Catalog). It's in the book II (that's "two") Cybernetic Frontiers. // Not only can't I identify your "parachutes" quote, but I have no idea what it means.// "Meanwhile the White House plans on issuing (sic) a proclamation creating a 200 mile economic zone around the

U.S. in an effort to demonstrate U.S. determination to boycott the [Law of the Sea Treaty]." In olden days the three-mile limit was set because that was the maximum range of coastal defense guns. Does this imply that we can now hit anything we shoot our money at, out to 200 miles? Hmm. Considerably more than the width of the Potomac. And they say a dollar doesn't go as far as it used to!

"True Confusions"-- Gee, Greg, you accurately portrayed the ukelele player as a (dubious) second tenor.

Bill L.-- "I have no storage problem with my belt pouch since I folded everything so that the spins matched." Surprise! According to Professor Pauli, you can put twice as much stuff in there if the spins don't match...

Rolf-- Doc Smith could write. He just didn't have a style that appeals to us today. Compare it to run-of-the-mill pulp stories from the late twenties and early thirties, and you'll see that he really was a craftsman-- but he liked writing that way.

I note that your zine's title evokes "There's More to the Theatre Than Repetition."

Greg-- I repeat: your biographer will not run short of source material. At least not for Ruffa: the Apa-Tech Years. // Confusion is actually on the outskirts of Ann Arbor this year, not downtown. But at least bookstore and restaurant runs won't be a forty-minute drive. // Too bad the Capricorn trivia bowl was another dud. How am I gonna sharpen my wits in practice for the Baltimore event? // I agree with most of your views on Oath of Fealty. At one time I had a lot of observations to marshal, but I never wrote the review and it's an old book now. // About private fortunes and scientific research: the January Physics Today has a lengthy memoir by Luis "Meteor Louie" Alvarez concerning Alfred Lee Loomis. Loomis was a physicist-banker who established a private laboratory in Tuxedo Park, N.Y., which studied ultras&nics, spectroscopy, precision timekeeping, physiology, brain waves, and microwaves. Between 1926 and 1940 significant work in all these fields, including some which was quite fundamental, came out of the Loomis Laboratory. Loomis was also important in helping the first of the Big Scientists, Ernest O. Lawrence, raise money for his accelerators.

Parenthetical initials with your titular conundrums should quiet some of the grouching-- though we do have some (triple) degenerate initials in this apa. // Baltimore hotels break down this way: four are real close, and all the others are miles away (off the map, in fact). So every intelligent member will list the same four hotels as his first four choices, and will perhaps not even bother with choosing remote hotels for

his fifth and sixth choices-- I didn't. It comes down to a game of Musical Chairs, and the faster you got your reservation in the mail, the better off you will be.

Your reservations about the Church (as custodian of a space program) are not quite on the mark, though I realize they were tongue-in-cheek. There's no reason why they should have starships. (Missionary fleets dropping Bibles from orbit? "...And welcome to the Twenty-One Centimeter Gospel Hour..." The beings now watching Mr. Ed, come to think of it, have already seen Bishop Sheen.) The Church doesn't automatically repress ideas, either. A lot of good science has been done by good Catholics. And sure, they were slow about Galileo and Copernicus, but it took them less than a century to accept Darwin. I will admit, however, that if the Church had maintained interstellar tracking stations, they would probably have been destroyed in the Thirty Years War if not before.

Mike Jittlov will be visiting PPRC in Houghton, about the time this is published.// AvWeek mentions Westars IX and X as request for K_u-band slots at 79 and 91 degrees West.// Re doctoring photos with computers: will astronomers now be tempted to fake evidence, as those cancer guys keep doing? The Discover article points out, by the way, that fakery by one image-processing system would be easy for another system (with the same resolution) to detect. It would need, I suppose, to look for spatial frequencies corresponding to pixel size. // Your caption for the Gary Hudson story is perfect. The picture reveals the Phoenix to resemble suspiciously Phil Bono's plug-nozzle booster designs for Douglas back in the sixties. But where's the R&D for plug-nozzles, whose operation must be much different from conventional spacecraft? Hudson strikes me as more of a grandstander than a realistic operator.

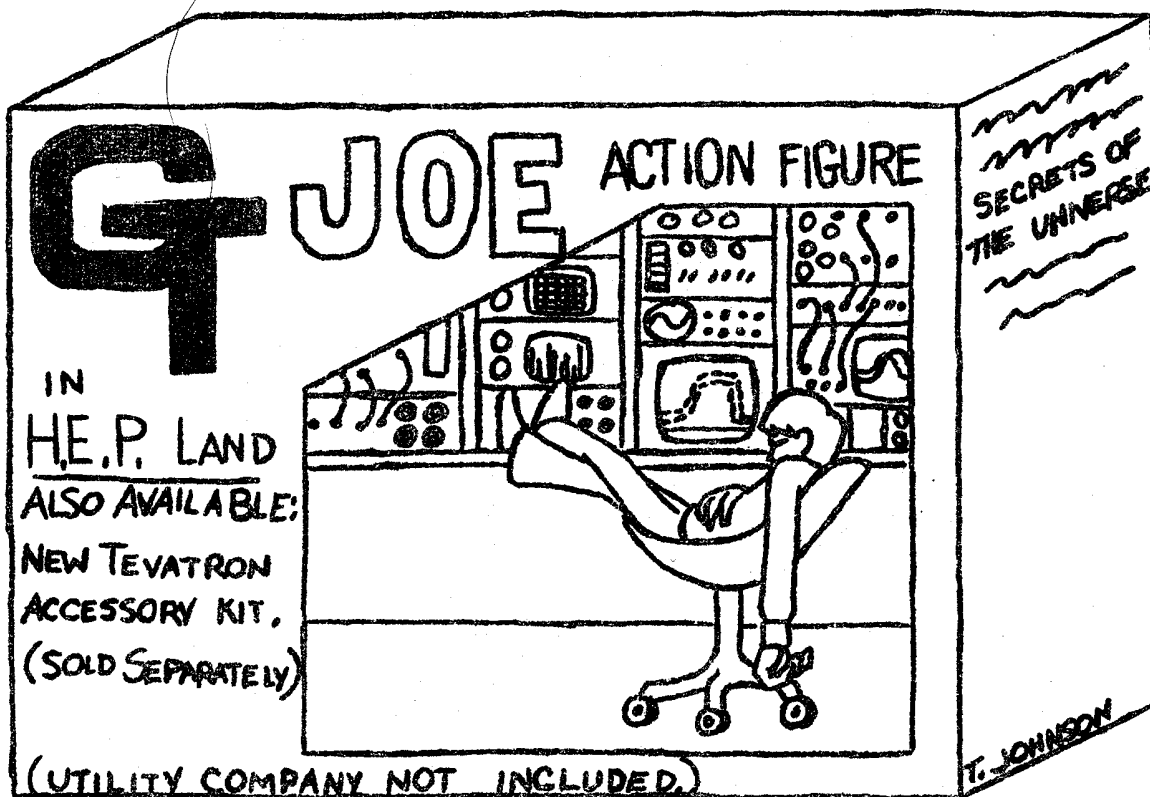
Keith-- Ah, Experiment 621. The Amazing Two-Headed Kaon Beam. Gordon Thomson gave a presentation on E621's requirements the other day, and I pointed out that he'd misspelled your name on his first transparency. Y&u owe me one.

Valli-- Sure, I like your "Dr. Gonzo's" titles the way they are. I am, after all, a lover of variety.// I have just one question about your proposed Special Interest Group, within General Technics, for "token liberal arts majors." Can I join? As a token science major?// Somehow when the idea of going somewhere on a train comes up, I always seem to be in too much of a hurry. The three-mile walk between my place and the nearest station doesn't help.// I'm sure that Rod's friend Ozzie in Kentucky is not Robert Osband of New York. Don't you recall that Ozzie (the NY one) was briefly in Apa-Tech a few years ago?

Andy-- Two paragraphs in three pages?// My FTS number is 370-4318.//

Misha-- Keel evening? Is that like Midsummer's Night?// The Denver area does have three NPR stations-- another argument for moving there-- but not many other places in the country do, I'll bet. I can get the Chicago one and the AM station from Champaign. Every now and then I get a faint suggestion of another one down in the low end of the FM band, but I can't tell where it might be.

Dave-- But it's such a good first half sentence.// Remember what Hank Zielinski told me upon a visit to his alma mater. "How's life out in the Real World, Hank?" I asked. He looked me in the eye. "Bill," he said gravely, "There is No Real World."// Re "architect Louis I. Kahn. Fascinating stuff. I want to design more like him." Are you sure the world needs more like him?



My Gal Friday

Bonnie Jones, 4912 N. Kostner, Chicago, Illinois 60630

Hi! As you can see my name is Bonnie. This my first APA so bear with me if I make mistakes. I called my APA what I did because I just read "Friday" by Heinlein and because, as a student aide, I do all kinds of errands.

Now as a way of introduction, I will tell you my life story. You can skip this part if you like. I am a native Chicagoian. I have lived in the same house all my life with my folks. Not exciting, but very stable. I went to Lane Tech High School (Oh No! Not another one!) and graduated in 1978 so I know people like Alex Ellinsen and Alice Insley. I recently graduated from Northeastern Illinois University with a B.A. in Geography and Environmental Studies. (More about that later) Currently, I am still taking classes and considering what to do next. I haven't decided on a graduate school yet so I might get a job for awhile. In less than two weeks I will be in the Virgin Islands for ten days doing geological and biological studies of St. Thomas and St. John for a handbook for the islands.

I grew up with science fiction. I teethered on Star Trek and went through puberty with stories like "Have Spacesuit Will Travel" My best friend also watched Star Trek but when it was over she went on to other things like horses. Even my sister got into horses but it was beyond me. I tried it once I even went to a horse ranch for a week. My sister said you have to show the horse who's boss, well my horse already knew, and it wasn't me.

By the time I got to high school, I was pretty much a loner, I did join chorus, which helped. It wasn't until my Junior year when I joined the Science Fiction Society at Lane that I was happy. Here were people like me, who liked what I liked. I was amazed. I went to my first convention that year, Windycon 1977. I don't know if that was Windycon III or IV.

When I went to college, I lost track with people so I didn't attend a convention until I took a class on science fiction. There just happened to be a person by the name of Andy Anda in the class. He got me going to conventions again. Andy loves to drive and so I tagged along. This year it's a little harder since Andy is at Los Alamos. I have to scrounge for rides. I don't have my own car.

Now you can start reading again. I have an idea that I got from a book I was reading recently, and I want to get your feedback on it. In the story, there was some sort of natural disaster, and these people felt they should repopulate the region. This got me thinking. Imagine yourself and a dozen or so of your friends isolated because of some disaster (don't worry about the disaster itself), what would be the best way for everyone to live together happily, or at least get along and still get the most out of the gene pool.

I considered some sort of rotation system in sleeping arrangements so that everyone has a chance of contributing to the gene pool but how long would the rotation be? One week, two, a month, several months, or maybe until a child is born? But this only considers the biological side of it. What happens when someone falls in love? I brought this question up to a teacher of mine, and he said two adults can live together happily and still have someone else's baby.

Another problem I considered is what happens to the second generation? They would have to know who their parents are so there would be no intermarrying for the first several generations.

Consider, to use the gene pool most effectively, for the first generation, each woman would have to have a baby from each man. If enough children were produced, this would not be necessary for the second generation.

One last question. If in the first generation, people would marry and stay with one person, what happens if there is an uneven number of people. What do you do with the leftovers?

I would appreciate replies to my concept to help me develop the idea so I might use it for a short story, or just for my own curiosity.

Since I still have half a page to go, I will tell you a little about geography. Geography is a lot more than memorizing state capitals. Literally, geography means the study of the earth, but it really is the study of spatial arrangements of the earth. Why things are where they are, like populations or resources. Geography can cover a wide range of topics - economics, politics, map making, natural resources, environmental law, population problems, pollution, climate, agriculture; almost anything you want to apply it to. Traditional geography involves studying a region, its climate, soils, vegetation, language, culture, population, agricultural practices. I personally like studying population problems, recycling, and climate- long term.

I worry about if we have enough resources to handle over 4 billion people, why the growth rate is so high in some countries and how to handle reducing the growth rate.

I'm big on recycling to save our natural resources. The United States is the fourth most populous country in the world, after China with 1 billion, India over .7 bil., Soviet Union with 270 mil., United States with over 230 mil. But the United States uses in some cases half of the world's resources used.

I'm also interested in long term climate changes like the next ice age and what causes it.

Well, I'm running out of time so I will end it here. I hope my discourse was interesting and enlightening, well, you can always line the bird cage with it. Bye!

THE WINDS OF CHANGE /Renee Sieber, 525 W.Walnut, Kalamazoo, MI 49007
(616) 344-1183

I'm sorry I haven't had time to write lately, I've been kept very busy. Some of it's been good, some bad. I'll talk about the bad first.

As most of you know Alex's dad died about 2 months ago. It was not quick as most of us would want to die. He was completely paralyzed; he couldn't speak or swallow, he even had difficulty blinking. Yet his mental faculties were untouched. We eventually were able to communicate with him via a letter chart broken up into rows beginning with vowels. We wouldn't have to go through the entire alphabet each time; we would go down the rows and then go across the vowel row that was specified. So at least he was able to let us know what his needs were and his wishes. He even cracked a couple of jokes.

The hardest times were when he told us he wanted to die. Alex's family believes very strongly in the quality of life not the sanctity of life. They don't want to be a burden to their family or to society. Some of the relatives were vehemently opposed to the family's request that if the time came that no resuscitative or life support equipment be used to sustain Earl's life. They felt that because he was so terrified about what had happened to him that he didn't know what he was saying. I was also worried in the beginning as I was not brought up with the philosophy of the quality of life and I figured that it was different espousing it while you were healthy (Earl was not) then if you were critically ill. I was, however, satisfied by his lucidity (considering that while we were reading the paper to him he was defining words that we didn't understand) and because he never changed his mind (we asked him, to make sure.)

When he died it was a relief to everyone. This might sound selfish now, but in view of how much Earl was suffering, both mentally and physically (when you can't swallow, saliva and fluids collect in your lungs. This fluid has to be suctioned out and by the way Earl acted and his monitors indicated it was extremely painful for him.) I'm sure it was a relief to him too. If he had lived he couldn't be cared for at home; someone who is completely paralyzed has to be watched 24 hours a day. In Intensive Care he had his own nurse that had the time to spell words out and wet his mouth. In a nursing home he would share a nurse with over 20 others. Alex and I tried to plan for that possibility by finding out what equipment was available for quadriplegics to communicate. Coincidentally, since our first computer product is a program that analyzes the input from biofeedback equipment we had the knowledge to produce an electronic alphabet chart. I think we'll still do it.

There was no funeral, but a wake/open house that friends and relatives attended. The only good thing that came of this was that

it brought the family together. Earl's father and mother died at an early age and the children were split up among relatives. His brother and sister who saw Earl before he died hadn't seen him in over twenty years. We met them and some aunts and cousins; it was nice to see ties strengthened.

Earl was a kind and generous man. He was well-read and could give 20 minutes of discourse on any subject you brought up. He was an excellent cook. He had an innate feel for electronics and electrical equipment. He opened his arms and his home to many fans, feeding them, helping them out with their computers, giving them an intellectual and stimulating environment in which to work and play. His one wish was to live to see Halley's Comet pass by, in about 4 years. We'd like to help something see it for him. So we've set up the Halley's Comet Fund. This fund will support the European Space Agency Giotto mission to Halley's Comet. We'd appreciate donations. So, if you knew Alex's Dad or you'd like to support a space project help us out. Thanks go to Andy, Greg, and Bill for helping me contact ESA.

Settling the estate and sorting everything out, it struck me how we've been trained, mostly by television, to sensationalize a tragedy for a little while and then forget it. After all, it's not news anymore. People send you a sympathy card and that's supposed to suffice. The pain doesn't go away, though. The taxes still have to be paid. The personal effects have to be dealt with, the house may have to be sold. You are constantly reminded of the departed yet are supposed to get on with your life. Other societies allow a year for mourning but there is no real respect in this fast-paced, superficial society for grief. You need to be allowed to mourn (men, too), to purge your grief. People should realize that you still feel the loss.

On to lighter things: My business still keeps me very busy. I have a very big job on the Apple /// and it requires the programming be in Pascal. So I have to learn Pascal. Yech! It was bad enough struggling to learn IBM Basic (especially their file handling.) Now I have to learn another language plus all the utilities I need. I wish I didn't have to; I don't like hacking. I program on computers because it's my job and because I produce products that do things for people when they're completed. Nonetheless, Marty assures me it gives me more respectability to program in Pascal.

I'm also doing a lot of training on VisiCalc and stock packages. Now, that's easy money if you train more than once. You spend twice as much time as you can charge for setting up the training but once you've done it, you don't have to do it again. It also helps me in my understanding of clients who have programming needs and their perceptions of what a computer can do. People have some crazy notions of the power of a computer.

As I mentioned above, our first product is finally out the door.

That is the biofeedback data analysis system. It works with hardware that interfaces biofeedback equipment with an Apple II. The program graphs the data on the screen and printer much like a chart recorder. There are two programs that configure the screen for the number of channels, charts, pens on each chart, scaling factors, etc. There are two programs that analyze the data. Not only that, the programs work! That is, on the Apple II. Don't believe it when they tell you that The Apple IIe is completely compatible with its ancestor. They're wrong. Now we have to figure out how to reconfigure the program for the new system and with no manuals, no less. To be consistent, the Apple people have released another product without the hardware manuals. We'll manage, somehow. Our next product, already started, is a Rourschauk (however you spell it, you know, the ink blots) test analysis system. It's interesting how they're scored. It all looks like crabs to me, though.

Marty is once again consumed with porting languages onto a micro. (Marty wants to point out that he has little time for his obsessions since he works at the bank all the time.) Now it's Tiny C. Only it's too slow. So I have to put up with his cackling about shaving seconds off the Sieve of Eratosthenes test he is continuously running. He's decided it'll never be fast enough so he's going to rewrite the architecture. I pointed out to him that it won't exactly be C anymore. That doesn't seem to bother him. He's looking for some really obscure languages to port over. He likes Tiny BCPL; I'm in favor of Tiny RPG.

We have two new furry additions to our family. (Marty is not one of them.) Our Kitty, named The Idiot, got pregnant the day before we got the male cat fixed. We thought we'd got him in time; apparently we didn't. They're really sweet and look like little bears. They looked like rats when they were born. The Idiot wouldn't act like a respectable animal and have her kittens in a secluded place; she had to have them in front of us. In fact, she wouldn't let us leave. She'd cry and then follow us around. She doesn't know how to pick them up either. If one escapes she looks for us and then mews at us. It puts a little Spring into your heart to watch them grow. We plan to train them on the laser at an early age.

We have been doing a lot of work on the house lately, stripping wood and painting. Our tax refunds are going into furniture (who can afford that stuff? I sympathize with Jamie and Gail.) We're hoping to have a house-warming sometime in the summer to celebrate our house and our family. Watch this space for further announcements.

That's all for now, hope to see you at WorldCon. Jamie, hope to see you at WesterCon.

Renée